

ACTIVE REAL-TIME ALIGNMENT SYSTEM FOR OPTOELECTRONIC (OE)  
DEVICES

ABSTRACT

A real-time, optoelectronic (OE) alignment system, including a first OE device  
5 and a second OE device optically coupled to the first OE device, is disclosed. In an  
exemplary embodiment of the invention, the alignment system includes a capturing  
means for maintaining the second OE device in a fixed position. The capturing means  
further retains the first OE device in optical engagement with the second OE device, with  
10 the first OE device further having a plurality of degrees of positional freedom associated  
therewith. An error detection means generates a positional error signal whenever either  
of the first and second OE devices has deviated from a desired optical alignment with  
respect to the other. In addition, an actuation means, responsive to the error detection  
means, automatically adjusts the position of the first OE device so as to bring said first  
OE device in the desired optical alignment with said second OE device.